

# Final Environmental Impact Statement

*for the Proposed Issuing of a Multiple Species Incidental  
Take Permit for the Daybreak Mine Expansion and Habitat  
Enhancement Project proposed by J.L. Storedahl and Sons,  
Inc.*

November, 2003

# FINAL Environmental Impact Statement

## Cover Sheet

**Title of Proposed Action** Issuance of a Multiple Species Permit for Incidental Take and Implementation of the J. L. Storedahl and Sons, Inc. Daybreak Mine Expansion and Habitat Enhancement Habitat Conservation Plan

**Responsible Agencies**

<b>and Officials:</b> Mr. David Allen Regional Director U.S. Fish and Wildlife Service 911 NE 11 <sup>th</sup> Avenue Portland, OR 97232	Mr. Bob Lohn Regional Administrator National Oceanic and Atmospheric Administration National Marine Fisheries Service (NOAA Fisheries) 7600 Sand Point Way, NE Seattle, WA 98115-0070
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<b>Contacts:</b> Mr. Tim Romanski U.S. Fish and Wildlife Service 510 Desmond Drive, SE, Ste. 102 Lacey, WA 98503-1263	Ms. Laura Hamilton NOAA Fisheries 510 Desmond Drive, SE, Ste. 103 Lacey, WA 98503-1263
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**Legal Mandate:** Endangered Species Act of 1973, as Amended, Section 10(a) as implemented by 50 CFR 17.32(b)(1) and 50 CFR 222.307

**Location of Proposed**

**Action:** J. L. Storedahl and Sons, Inc. Daybreak Mine Site  
5204 NE Storedahl Pit Road,  
LaCenter, WA 98629

**Applicant Name:** J. L. Storedahl and Sons, Inc.  
2233 Talley Way  
Kelso, WA 98626  
Contact: Mr. Kimball Storedahl, Vice President

Storedahl Properties, LLC  
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## **U.S. Fish and Wildlife Service and NOAA Fisheries**

### **Final Environmental Impact Statement**

#### **for the Proposed Issuing of a Multiple Species Incidental Take Permit for the Daybreak Mine Expansion and Habitat Enhancement Project proposed by J.L. Storedahl and Sons, Inc.**

### **Executive Summary**

#### **Introduction**

J. L. Storedahl and Sons and Storedahl Properties LLP (collectively Storedahl) are applying for Incidental Take Permits (ITP) from the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration (NOAA) National Fisheries Service (NOAA Fisheries) (collectively referred to as the “Services”) under Section 10(a)(1)(B) of the Endangered Species Act of 1973 (ESA), as amended. ITPs would authorize incidental take of nine federally protected, candidate and proposed salmonids and terrestrial species potentially associated with expanded mining and reclamation activities and the processing of sand and aggregate at the existing Daybreak Mine site and adjacent properties owned by Storedahl in Clark County, Washington. See Figure 1-1. The application for the ITP is supported by a final Habitat Conservation Plan (HCP). The HCP describes the activities associated with the mining, processing and transportation of rock products that would be covered under the proposed action. The ITP is proposed for a period of 25 years. This HCP and its technical appendices are incorporated by reference as part of the FEIS.

The Federal actions of approving an HCP and issuing an ITP have the potential to affect the environment. The Services’ decisions of whether to approve the proposed HCP and issue the ITP, therefore, are actions subject to review under the National Environmental Policy Act (NEPA). The Services are required to prepare a NEPA review document (in this case an Environmental Impact Statement (EIS)), and circulate the environmental review package (NEPA document and HCP and supporting documents) for public review. The Draft EIS was available for a 92-day public review and comment period from November 22, 2002 to February 21, 2003. Following the public comment period on the DEIS, the Services reviewed and responded to comments in writing or in changes to the two documents, resulting in a final HCP and Final EIS (FEIS). This FEIS will be circulated for an additional 30-day public review period. Following the 30-day FEIS review period, the Services will prepare a Record of Decision (ROD) that will formally document whether Storedahl’s HCP and ITP proposal is approved or denied.

#### **Alternatives Analyzed**

Four alternatives were analyzed in the Draft and this FEIS, including two no action alternatives and two action alternatives. The no action alternatives include 1) continued processing of imported mineral resources, but no additional mining on the project site and partitioning it into rural residential or agricultural tracts; and 2) expanded mining and processing with subsequent

partitioning into rural residential tracts. The action alternatives are 1) expanded mining of the project site and reclaiming it according to the proposed HCP; and 2) expanded mining of the project site and reclaiming the property according to an earlier draft HCP. Two no action alternatives are described because of the need to identify and analyze the effects of activities on the project site without any federal action. Following is a brief description of each alternative.

***No Action Alternative A-1: Rural Residential Outcome***

Alternative A-1 would result in the partitioning of the 300-acre site into approximately 14 rural residential/agricultural tracts consistent with underlying county zoning. The Services would not issue an ITP, and there would be no expansion of gravel mining and no implementation of the habitat enhancement program described in the final HCP.

The property would be partitioned into 20-acre tracts (which does not require county, state or federal regulatory review). These tracts would be sold, and would most likely be used for further residential development and as “hobby farms”. The water rights attendant to the property and certificated under Washington State water rights law, would also be sold or apportioned for irrigation, and would not be transferred to the State for augmentation of instream flows in Dean Creek and the East Fork Lewis River as proposed in the final HCP. Aggregate processing, which occurs intermittently throughout the year, would continue at the existing plant until the supply of imported material was exhausted. The existing ponds and processing area would then be reclaimed and included in the partitioned tracts.

***No Action Alternative A-2: Mining and Reclamation and Avoid Take Without Implementation of HCP/ITP***

Alternative A-2 would result in the excavation of 114 acres which would be reclaimed together with the existing ponds and processing area and then be partitioned into 7 to 10 rural residential homesites of approximately 30 acres each. Mining would proceed through seven sequential phases according to a mining and reclamation plan that would be prepared to meet the standards of the Washington Surface Mining Act, the requirements of a National Pollutant Discharge Elimination System (NPDES) permit issued by the Washington Department of Ecology (Ecology), and the various land development standards of Clark County. Mining and reclamation design activities would also include any mitigation measures required as a result of Washington State Environmental Policy Act (SEPA) review. Take of listed species would be avoided and there would be no issuance of an ITP.

The sequence of mining phases would be common among the three mining alternatives, i.e., A-2, B and C, with the exception that under Alternative B there would be no mining southwest of Bennett Road. (See Figure 2-2.)

***Action Alternative B: Mining, Reclamation and Habitat Enhancement with Implementation of HCP/ITP (preferred action)***

Alternative B is the preferred alternative. It would include issuance of an ITP by the Services for incidental take associated with expanded mining, continued processing and reclamation, and habitat enhancement and management of the site as proposed in the final HCP (excavation on approximately 101 acres and backfilling and reconfiguring of approximately 26 acres of existing ponds). Mining would take place under a comprehensive program that encompasses 18 conservation measures, including a \$1 million endowment to facilitate site management and preservation in perpetuity. Habitat created would be comprised of a mosaic of open water, emergent wetlands and valley bottom forest created from gravel mining and natural features of the project site. At completion of mining and reclamation, a conservation easement prohibiting future uses that would conflict with fish and wildlife habitat values would be placed on the property, together with the fee simple title conveyed to one or more public or nonprofit conservation organizations. This provision would ultimately make the property available for inclusion in Clark County's ongoing lower East Fork Lewis River "greenbelt".

As with the "no-action" mining alternative, excavation would proceed in seven phases, with reclamation and habitat enhancement sequenced concurrently with mining. Establishment of mixed forest, vegetative screening, riparian shading and other habitat enhancements consistent with the HCP have already begun on some portions of the site.

The 18 conservation measures proposed within the context of the HCP are designed to minimize and mitigate the impact of potential take. The measures are grouped into four categories addressing water quality, water quantity, channel avulsion and species and habitat conservation. Four mitigation and conservation measures included in the final HCP are unique to this preferred "action alternative" outcome. An irrevocable endowment of \$1 million would be created and accompany the conveyance in fee of the property at time of transfer or completion of the term of the ITP. The funds would be earmarked for habitat monitoring, adaptive management, and response to changed circumstances within the HCP area. In addition, in-kind contributions of labor and/or materials, with a minimum value of \$25,000 per year, would be managed by the Lower Columbia Fish Recovery Board (LCFRB) to enhance floodplain and habitat functions within the East Fork Lewis River basin in locations outside the applicant's property boundaries. Storedahl also has agreed to post a bond to cover avulsion contingency upon initiation of the ITP, and to ensure that funds are available for appropriate responses to an avulsion threat, should it develop. A perpetual conservation easement would be established on portions of the property not proposed for mining. A similar conservation easement would be established on the remainder of the property after completion of reclamation and prior to the fee simple transfer of the entire site to one or more public or private nonprofit organizations. Certificated water rights in excess of the amount necessary to conduct operations using a proposed "closed loop" process water clarification system (the majority of currently held rights) would be donated to the Washington State Water Trust. At the completion of processing operations or the term of

the ITP, whichever comes first, the balance of the water rights would be transferred to the State Trust.

Under the final HCP, Storedahl would be responsible for implementing the measures and monitoring the site over the 25-year life of the ITP in order to assess whether conservation goals were being achieved. Alternatively, responsibility for monitoring and adaptive management in response to changed conditions during monitoring would transfer to the fee simple recipients at the conclusion of mining and reclamation/enhancement activities or the term of the ITP. These responsibilities would be funded with the investment proceeds from the \$1 million endowment and/or the corpus of the endowment.

***Action Alternative C: Development Under July 2000 Working Draft HCP with ITP***

Alternative C would result in the issuance of an ITP by the Services for expanded mining, continued processing and habitat enhancement and reclamation under an HCP less extensive than the preferred alternative. This alternative is similar to the preferred alternative, but with fewer (14) and less intensive versions of several conservation measures. A total of 114 acres would be excavated within the proposed 178-acre expansion area. Processing would continue as in the other alternatives.

Post-mining uses of the property in this alternative are similar to those in the other mining-expansion alternatives. Open-water ponds, wetlands, and valley-bottom forest would be created to provide fish and wildlife habitat as well as open space for low-impact recreation. When reclamation has been completed, the property would be offered to a public or private nonprofit organization for management as a conservation reserve. Public access to the property would be limited. Storedahl would allow construction of a trail that would link the property with the open space/greenbelt being acquired by Clark County along the East Fork Lewis River.

As with Alternatives A-2 and B, the two other mining outcomes under consideration, the expected life of the project ranges from 10 to 15 years. Mining would progress in the same seven phases previously described, with reclamation and habitat enhancement implemented sequentially.

The 14 conservation measures proposed under this alternative are intended to provide a benefit for the recovery and survival of the identified species and avoid take as defined in the ESA. They can be grouped into the same four categories as outlined under Alternative B, and share some similarity. However, as mentioned above, there are four fewer measures and several of the common measures are not as intensive as their counterparts in Alternative B.

**Affected Physical Environment and Environmental Consequences**

This section summarizes the environmental analysis of the four alternatives presented in Chapter 3.

### ***Topography, Geology, Soils, Climate and Air Quality***

The project site is located in the relatively flat alluvial valley on the north bank of the East Fork Lewis River, between River Mile (RM) 7.2 and RM 9.0. Surface elevations range from 30 to 60 feet above mean sea level (MSL). Natural slopes are less than 4 percent, but manmade slopes may be as high as 25 percent on the edges of ditches, road cuts, berms, and raw aggregate, sand or topsoil stockpiles. Before the area was developed for agriculture, in the early 1950's, the river in the vicinity of the project site was characterized by braided channels with extensive meanders and associated wetlands throughout the valley floor. By 1951 the area was cleared, drained, and leveled for farming, primarily pasture (Collins 1997).

Near the project site, the river valley formed by the lower East Fork Lewis River cuts through a thick sequence of alluvial materials known as the Troutdale formation. The upper member of the Troutdale formation is primarily sand and gravel and the lower member of the Troutdale formation is primarily fine sand, silt and clay. The alluvium underlying the valley floor consists of gravel, cobbles, sand, and silt, and ranges in thickness from several feet to 50 feet at and near the project site. Gravel bars are common in the river reach adjacent to the subject property, but they are conspicuously absent downstream in the tidal influence zone, where fine sand, silt, and clay predominate. For a detailed description of the substrate composition of the East Fork Lewis River, please see HCP Section 3.1.5.1. For more information on sediment transport, please see HCP Technical Appendix C, Addendum 1.

A small seasonally intermittent stream, Dean Creek, borders the Daybreak site to the northwest. For approximately 1,350 feet the stream is adjacent to a livestock pasture, and the banks are typically lacking in structure and mature vegetation due to historic livestock grazing. Downstream of this reach and off-site, the stream flows for about 0.5 mile through a series of beaver ponds and grassy wetlands and often lacks a defined channel.

The 1972 Soil Conservation Service (SCS) *Soil Survey of Clark County, Washington*, identified and mapped the following soils at the project site: Washougal loam, Washougal gravelly loam, Puyallup fine sandy loam and cobbly Riverwash. The loams overlie sand and gravels and have high permeability with low surface runoff potential.

While road development, mining and processing have occurred on approximately 80 acres of the site over the last 30 years, the remaining 220 acres of the project site have generally been used for irrigated hay and corn production or remained in an undisturbed state.

### ***Potential Effects on Topography, Geology, Soils, Climate and Air Quality***

All four of the Alternatives discussed would have some effect on topography, geology and soils and little effect on climate or air quality. Alternatives A-2, B, and C would all

change the topography and soils associated with the site. However, all three of these alternatives propose some form of best management practices to control off-site soil migration and minimize dispersion of erodible soils into the East Fork Lewis River watershed. All three of these alternatives also provide mitigation measures to restore the area to emergent and forested wetlands and an open water pond system interspersed within a valley bottom forest environment. Generally, the effects on topography, geology and soils by all three mining alternatives would be similar with variations only in the area of mining and reclaimed wetlands or uplands. Notable differences are Alternative B's inclusion of importing/importation of materials to infill and reconfigure the existing ponds, and, an endowment fund to ensure that the mitigation measures are maintained in perpetuity, and a bond cover avulsion contingencies, whereas Alternatives A-2 and C do not.

Alternative A-1 does not substantially change the topography of the land, and would not require substantial amounts of soil to be moved during the course of subsequent home or outbuilding construction. Alternative A-1 does not provide for best management of the site following partitioning of the property into individual 20-acre parcels, nor does it ensure that the site would be maintained in such a fashion as to prevent soil erosion from affecting the East Fork Lewis River. However, County regulations governing building, grading, vegetation clearing and construction would likely control to some degree soil erosion.

None of the alternatives described herein would have any more or less effect on climate or air quality issues.

#### *Cumulative Effects on Topography, Geology, Soils, Climate and Air Quality*

Each alternative would result in a permanent change to the landscape. Effects of Alternative A-1 would be limited to grading for residential structures and roads, and perhaps more intensive agricultural activities. Conversely, Alternatives A-2, B, and C would all result in increased forested upland, emergent wetlands and open water ponds. However, Alternative A-2 would include 7 to 10 sites for rural residential homes around or between the reclaimed ponds and wetlands. Alternative B would include reshaping the contours of the existing ponds, with a reduction in the open water area, added forested wetlands and reduced depths in the existing ponds. Such restoration would facilitate inclusion of the site in the open space greenbelt being acquired by Clark County and others. These wetlands and bottomland forest areas would benefit from the proposed endowment fund intended to assure proper management of the property in perpetuity. Similarly, reclamation and habitat enhancement activities included in Alternative C would also fit Clark County's scheme for the open-space greenbelt, but not include the funding mechanism for management of the property.

#### ***Floodplain***

The project site occupies portions of the alluvial valley formed by the East Fork Lewis River, and portions of the site are located within the area mapped as the 100-year

floodplain (see Figure 3-5). Mining under alternatives A-2, B and C is proposed only in areas falling outside the 100-year floodplain designated by the Federal Emergency Management Agency (FEMA) in a Letter of Map Revision on June 16, 1999. Reclamation of the existing ponds under Alternative A-1, as well as the new ponds under Alternatives A-2, B and C, and upland plantings would take place within the regulatory floodplain.

#### *Potential Effects of the Alternative Actions on the Floodplain*

Of the four alternatives discussed, Alternative A-1 has the greatest potential for indirectly affecting the 100-year floodplain with the building of homes or outbuildings; Alternative A-2 would have a similar effect albeit to a lesser degree because fewer structures would be constructed and they would be interspersed in uplands throughout the reclaimed pond and wetland complex. These potential effects are related to possible responses to the threat of flooding and channel migration that could threaten improved property and infrastructure. In the three mining scenarios, all active mining and reclamation activities would occur outside of the 100-year floodplain except for upland planting and the reclamation of the existing ponds. However, under Alternative A-2 there is also the potential need for flood response activities. Some restoration and enhancement measures proposed in Alternatives B and C would occur within the 100-year floodplains of the East Fork Lewis River to enhance the natural floodplain relative to its current state. However, the reclamation actions proposed in Alternative B for the existing ponds are intended specifically to ameliorate the potential effects of an avulsion through the existing ponds, should it occur.

Geomorphic changes to the floodplain, resulting from an avulsion (a sudden and unexpected shift of the river channel) of the East Fork Lewis River, could occur and cause impacts under all four alternatives. The most probable location for an avulsion under all alternatives is through the existing Pond 1. Such an avulsion could result in increased channel migration and channel meandering adjacent to the site, and upstream and downstream from the site, erosion, movement of sediments, increased short-term turbidity, and the loss of salmon habitat. Alternatives A-1 and A-2 pose the greatest potential for avulsion in the long term, because site reclamation would be likely limited to wetlands creation during the reclamation of the existing and any future ponds. Threat of avulsion under Alternatives A-1 and A-2 would likely indirectly result in the addition of structural controls such as bank hardening and/or levees to protect improved property and structures. In the case of Alternatives B and C, the potential for avulsion of the river into the existing ponds is reduced because of proposed extensive valley bottom forest plantings which, when mature, would reduce flood velocities and better anchor the soils to prevent new channel creation. However, should an avulsion occur, Alternative B provides for controlled redirection of potential avulsion flow paths back to the main channel, a reduced potential for headcutting, and a more stable channel downstream of the site. Under Alternative B, the longevity and magnitude of avulsion effects are expected to be shorter and lesser than any of the other alternatives, and a funding mechanism is included to ensure that the avulsion contingency plan is available for

implementation after the term of the ITP expires. Alternative C provides for engineered/structural responses to prevent avulsion and, if necessary, to repair a breach after the event through the term of the ITP. Please see HCP Section 4.3.5 for additional information.

### *Cumulative Effects on the Floodplain*

If the site as expected is subsequently developed for rural residential housing under Alternatives A-1 and A-2, and additional rural residential and agricultural development upstream and downstream occurs, there will be greater pressure for flood and channel migration control to ensure public safety, and to protect property and infrastructure. Control and constriction of the channel to protect residential development areas within the 100-year floodplain will reduce the area available for channel migration. The reduction of floodplain storage will increase the delivery of fine sediments to the downstream channel.

The increased rate of sedimentation in the vicinity of the development will also steepen the channel gradient locally. Correspondingly, the upstream channel gradient will decrease due to the downstream increased rate of deposition. This will cumulatively reduce the hydraulic capacity of the upstream channel and increase the risk and frequency of flood impacts to developed areas. The primary concern under the baseline and future conditions is the potential effect of an avulsion into the existing ponds. Both Alternatives B and C include monitoring channel migration and preemptive measures to avoid an avulsion, as well as post-avulsion recovery actions. Alternative B emphasizes bioengineering techniques, while Alternative C is oriented toward structural responses. Alternative B also provides for “avulsion readiness” to reduce potential effects, should an avulsion occur.

Alternatives A-1 and A-2, and to a lesser degree Alternative C, could result in construction of up to 8,000 linear feet of bank and flood protection structures such as riprap and levees. This would result in an increase of more than 25 percent over existing bank hardening and levees on the lower East Fork Lewis River, and further reduce the opportunity for the river to naturally migrate across its floodplain. Under Alternatives B and C, the cumulative effects to the hydraulic and regulated floodplain are effectively the same as under the existing or baseline conditions. Since the property would not be developed for rural residential uses, there will not be the pressure to control or restrict channel migration and flooding beyond the level that exists today.

### ***Surface Water***

There are three surface water bodies on or adjacent to the subject property: the East Fork Lewis River, Dean Creek, and the existing ponds resulting from previous mining.

### East Fork Lewis River

Water Quantity: The mean annual flow rate of the East Fork Lewis River at the project site has been estimated to be 967 cubic feet per second (cfs), and average monthly flows range from 108 cfs in August to 1,909 cfs in December. The East Fork Lewis River is a gaining stream in its lower reaches, that is, its base flow is supported by groundwater discharging to the stream during low flow periods.

Water Quality: High temperature during summer is one of the most important water quality issues on the lower East Fork Lewis River. Because cool water temperatures are critical to the survival of anadromous salmonids, detrimental effect of high water temperatures is of particular concern. The East Fork Lewis River is Clean Water Act §303(d) listed due to high temperatures attributable to landscape changes in the upper watershed (Hutton 1995b). The existing temperature regime in the lower East Fork will most likely continue to be a problem, with or without the expansion of the Daybreak mine. Please refer to HCP Section 3.1.5.1 for an extensive analysis of existing background water temperature in the East Fork Lewis River, and Section 3.1.4.2 regarding groundwater flow systems, seepage velocities and groundwater/surface water connections.

Dissolved oxygen levels in water bodies are a function of several factors, including temperature, the degree of water column mixing, photosynthetic activity, and decomposition rates of organic material. Low dissolved oxygen levels do not appear to be a water quality issue in the East Fork Lewis River near the project site and recorded levels have not been lower than Class A criterion in monthly monitoring between 1976 and 1992 at the Daybreak Park station. Please refer to HCP Section 3.1.5.1 for additional information.

Turbidity in water is a result of materials such as clay, silt, particles of organic matter, soluble colored organic compounds, and plankton suspended in the water column. Since turbidity reduces light penetration, it can reduce photosynthesis and productivity of a water body. Over the past several years Storedahl has achieved turbidity levels in the discharge from the existing Daybreak Mine ponds during processing operations below 11 NTU and generally averaging 8.5 NTU, well below the NPDES Permit limit of 50 NTU and near the state water quality standard for the watershed.

### Dean Creek

Water Quantity: Dean Creek borders the northwest portion of the project site for a distance of approximately ½ mile. Only two recorded instantaneous flow measurements are available for Dean Creek. In October 1987 and October 1988 respectively, the flow in Dean Creek was 0.10 cfs and 0.15 cfs (McFarland and Morgan 1996). The monthly flow pattern is believed to be similar to that of the East Fork Lewis River. High flows occur during the winter months of November to February, while low flows are fed by groundwater during the late summer months of July through early October. Notably, a portion of Dean Creek adjacent to the site is dry during the late summer.

Water Quality: Water quality in Dean Creek affects the quality of fish habitat in the creek, water quality in Pond 5 (which it may sometimes enter during high flow periods), and water quality in the East Fork Lewis River where it discharges approximately 0.4 miles downstream of the Storedahl property. Limited data suggest that temperature, dissolved oxygen levels, and fecal coliform are water quality problems in Dean Creek as it flows adjacent to the Storedahl property. Please refer to FEIS Section 3.4.2.2 for additional discussion. In the upper reaches of the Creek, with its higher gradient and shading by riparian vegetation, the water temperatures are lower and the water is well oxygenated, indicating potential for winter salmonid habitat if the lower reaches could be restored to more closely resemble their pre-agricultural development conditions.

#### Existing Mine Ponds, Process Water and Operational Standards

Five existing ponds created by past gravel mining dominate the southern and western portion of the project site. Water enters the ponds as groundwater inflow and is supplemented by incident precipitation and seasonal run-on. Water leaves the ponds by surface-water overflow, groundwater seepage, and evaporation. The contribution of each varies seasonally. The water level in the ponds generally corresponds to the local groundwater table.

From a limited data set, it appears that water temperatures in the existing ponds typically exceed 18° Celsius in summer months throughout the shallower ponds and near the surface in the deeper ponds (at depths less than 10 to 15 feet). Deeper ponds had colder water at depth due to stratified conditions. Pond surface water outflow temperatures were generally similar to the temperature of water at the surface. It appears that under present conditions, a reduction in dissolved oxygen concentrations occurs during the summer in the deep ponds, but due to recirculation of the process wash water and resulting continuous mixing of water in Ponds 1 and 2, dissolved oxygen is not as depressed in the shallower ones. Turbidity levels as measured in the ponds and the outfall since incorporation of an advanced water treatment system have fallen dramatically and are expected to have a positive effect on dissolved oxygen levels as water clarity continues to improve. From the limited data, it is difficult to conclude whether high fecal coliform levels ever occur in the Daybreak ponds, although such occurrences might be expected as a result of water fowl use.

#### Potential Effects of the Alternative Actions on Surface Water

Of the four alternatives discussed, only Alternative A-2 would have no net effect on surface waters, relative to existing, baseline conditions, as processing of materials and discharge of water into Dean Creek under Alternative A-2 would continue under existing processing procedures at the site. Alternative A-1 would potentially result in increased stormwater runoff from impervious surfaces and reduced water quality effects due to the actions of individual landowners who would likely use pesticides, herbicides, and/or fertilizers to maintain their residential lawns or in the process of undertaking farming activities. However, assuming that best management practices are adhered to, these

effects should be minimal. Alternatives B and C would mitigate potential impacts to surface water quality by utilizing enhancement features that would increase water clarity, the amount of dissolved oxygen in the water entering Dean Creek, and reduce its water temperature. Please see especially HCP Section 6.2.5.2 for a detailed discussion of the closed loop clarifier system, which would result in effectively no release of process water into the ponds.

In all three mining alternatives, the amount of surface water available on-site would be increased by the creation of open water ponds where irrigated agricultural uplands currently exist.

### *Cumulative Effects of the Alternative Actions on Surface Water*

Conversion of the property into large tracts for rural residential or small-scale agricultural uses would increase the amount of impervious surface and the amount of runoff, adding to the general increase resulting from development throughout the basin. Runoff would carry fine sediment and likely increase turbidity during storm events, and would transport nutrients and contaminants associated with rural residential development to Dean Creek and the East Fork Lewis River. Water temperature would not be expected to change, and changes to dissolved oxygen would be unlikely.

Water bodies receiving runoff under Alternative A-2 would be somewhat less affected than under the first alternative, as there would be fewer tracts developed and less agricultural land for farming activities. Runoff volumes leaving the site would be lower and would carry fewer contaminants. During the course of processing under Alternative A-1, and mining under Alternative A-2, surface and process water would be treated through the existing ponds using the currently implemented treatment additive system to maintain discharge turbidity well below permitted levels, and thus no significant change from baseline conditions or cumulative effect. Following the cessation of processing and mining, there would be no further discharge of process water, and a likely reduction of turbid discharges from the ponds.

Local and regional surface water systems would be unaffected under Alternatives B and C. Implementation of the 'closed-loop' system for process water treatment would effectively eliminate discharge of process water to the existing ponds and would further reduce turbidity levels in the discharges to Dean Creek and the East Fork Lewis River. Alternatives B and C provide for low flow augmentation of Dean Creek and Alternative B includes the donation of groundwater rights to the Washington State Trust for instream flow enhancement, potentially increasing the base flow in the river. Fecal coliform and pH levels are projected to be the same as under existing or baseline conditions. As with Alternative A-2, monitoring data and projected future conditions show that groundwater contributions to the East Fork Lewis River would continue to be cooler than the river during critical low flow periods.

## ***Groundwater***

The potentially effected environment includes the groundwater in the immediate vicinity and down gradient of the existing ponds. Potential impacts include changes in water availability and quality. The most important issues relate to the hyporheic zone, that is, that portion of the saturated zone where there is bi-directional mixing of surface and groundwater supporting biological activity, and baseflow recharge to the East Fork Lewis River.

Flow paths indicate that potential hyporheic flow in the vicinity of the site migrates through the existing ponds; therefore, hyporheic biogeochemical or faunal characteristics resulting from expanded mining at the site are expected to be similar to what is currently observed. Please see HCP Section 6.2.3 for additional discussion. Fecal coliform levels, turbidity, pH, and dissolved oxygen content of pond water entering the groundwater from the new ponds is unlikely to have any effect on the water quality of the East Fork Lewis River or Dean Creek. Only temperature has been identified as varying from readings identified in the surface waters receiving groundwater flow from the site, with the temperature of the groundwater down gradient from the ponds being lower than the East Fork Lewis River during late summer.

### ***Potential Effects of the Alternative Actions on Groundwater***

No significant effect to local groundwater resources is expected to occur in any of the four alternatives. In the case of Alternative A-1, there is not expected to be any significant local effect on groundwater resources due to the limited amount of groundwater withdrawal by individual landowners. In the case of the three mining alternatives, no significant effect on local groundwater is expected to occur due to the proposed method of mining and reclamation, such that the water table in the area will remain relatively stable.

### ***Cumulative Effects on Groundwater***

Cumulative effects of the alternative actions on groundwater all relate to water quantity. The 14 tracts created under Alternative A-1 would in all probability result in new wells being drilled, such that each parcel would be served by individual water wells with exempt rights to withdraw up to 5,000 gallons of groundwater per day. The existing certificated water rights attached to the property would be sold or leased to another user in the East Fork Lewis River Basin, resulting in a cumulative net increase of groundwater withdrawal in the basin. However, because the aquifer is so prolific, no adverse impacts to local users or the interface with surface water are expected.

Use of the site as described in Alternative A-2 would increase the total groundwater withdrawn or lost compared to Alternative A-1 or current conditions. Again, the water rights would be sold, 7 to 10 domestic wells installed, and the ponds created from the

proposed mining would increase the volume of evaporation over current conditions, resulting in a cumulative net loss of groundwater in the basin.

Implementation of Alternatives B and C would result in cumulative impacts similar to Alternative A-2 on local groundwater flow systems. However, in neither case would there be any direct groundwater withdrawals for on-site domestic use. Both Alternatives B and C would increase evaporation because of the increased surface water area resulting from the proposed ponds. In both cases, the resulting pond surface area would be smaller than the area historically irrigated, the result being that the water loss would be reduced from current conditions. Under Alternative B, the transfer of the project site water rights to the Washington State Water Rights Trust, which would augment flows in the East Fork Lewis River and Dean Creek, would offset any groundwater lost to evaporation during late summer and early fall. This would result in no cumulative loss of groundwater in the basin under Alternative B. Alternative C does not provide for gifting the existing water rights to the State Water Rights Trust and therefore would result in a cumulative net loss of groundwater in the basin.

Effects to the hyporheic zone are primarily controlled by the existing ponds and are local in nature. No significant change is expected under any of the alternative scenarios. Therefore, the cumulative effects to the hyporheic zone of the East Fork Lewis River are negligible, relative to existing or baseline conditions.

## **Affected Biological Environment and Environmental Consequences**

### ***Fish and Aquatic Habitat in the East Fork Lewis River and Dean Creek***

The responsibilities of the Services under the ESA are described in Section 2.1 of the final HCP. Briefly, the Services are responsible for listing species, subspecies or distinct population segments when their continued existence becomes at risk. Section 10(a)(1)(b) of the ESA authorizes the Services to issue permits for incidental take of listed species, which, in turn, allows a non-federal entity to obtain authorization for incidental take of covered species for activities that might occur “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.” The applicant must develop and submit a conservation plan that, among other things, minimizes and mitigates the impacts of take to the maximum extent practicable.

This EIS addresses eight fish species that are protected under the ESA, or are species of concern and are of known or probable occurrence in the East Fork Lewis River. These species include six salmonids: coho, Chinook and chum salmon, steelhead, coastal cutthroat and bull trout, and two species of lampreys. Each of these species is anadromous or contains individuals with anadromous life histories. Spawning habitat for salmonids occurs in riffle habitat downstream and upstream of the site. Because Dean Creek is a tributary to the East Fork Lewis River that shares some of the same fish species, fish and aquatic habitat effects in Dean Creek resulting from each alternative are expected to be similar to those for the East Fork.

### Potential Effects of Alternative Actions on Fish and Aquatic Habitat

None of the four alternatives is expected to have any direct impact to covered fish or aquatic habitat, except in the unlikely event an avulsion occurs. Alternatives B and C would provide mitigative measures that would enhance the immediate riparian areas on-site and adjacent to the East Fork Lewis River and Dean Creek and, therefore, would improve aquatic habitat relative to existing conditions over the long run. Improvement in aquatic habitat is expected to benefit the above listed salmon and lamprey species.

In the unlikely event of an avulsion, fisheries and aquatic habitat would be affected under all four alternatives. In the case of Alternative A-1, measures to protect property and control erosion would likely limit the potential for covered aquatic species to utilize the area for spawning and rearing. Under alternatives A-1 and A-2 and C, the likelihood, magnitude and duration of impacts to aquatic habitat and fishes associated with avulsion are expected to be much greater than under alternative B. Under all the alternative scenarios an avulsion could increase the potential for fish to become stranded in the existing ponds and related wetlands and suffer increased predation. Under the preferred alternative B, these avulsion related effects would be reduced by reconfiguration of the existing ponds to provide a preferred flow path for a potential avulsion. Under this alternative a potential avulsion would be most likely to follow a relict channel path through the existing ponds and return to the main channel downstream of the project site, avoiding potential stranding and increased predation in the actively mined areas. Existing ponds would not be reconfigured under the other alternatives.

### Cumulative Effects of the Alternative Actions on Fish and Aquatic Habitat

All four alternative actions would take place outside of the 100-year floodplain with only limited exceptions in each case. Residential structures and other improvements could locate within the regulated floodplain under alternatives A-1 and A-2. Under the three mining alternatives, all expanded mining activities would be well away from the East Fork Lewis River; outside the CMZ; and separated from Dean Creek by a buffer zone, which would be enhanced to varying degrees in all three alternatives. In all cases, the potential cumulative adverse effects would be primarily related to stormwater runoff and avulsion. Measures to mitigate or control for these factors would be made in varying degrees under the three mining alternatives, and until the cessation of processing under Alternative A-1. Longer term, there would be an increase in secondary opportunities under the three mining alternatives. Secondary opportunities would be related to habitat enhancements, both on- and off-site. Again, the three mining alternatives would pursue these activities to varying degrees, while the rural residential development alternative would not.

Following the cessation of processing, Alternative A-1 and A-2 would result in stormwater management activities implemented on an individual tract basis, and would also substantially reduce the opportunity for a coordinated revegetation plan with the goal of restoring a native, valley bottom forest landscape. Further, development of the rural residential tracts would effectively prevent the inclusion of the site into the greenbelt

through the East Fork Lewis River valley being acquired and preserved by Clark County and its partners, and thus substantially reduce the potential for generalized habitat enhancement efforts focused on improving riparian and fish habitat. There would also be no efforts directed at off-site habitat enhancements within the East Fork Lewis River basin.

The cumulative effects on fish and aquatic habitat would vary with the three mining alternatives. All would be required to follow stormwater management and erosion control plans, comply with NPDES permit standards for stormwater discharge, and meet the requirements of an approved reclamation plan, which would include sequential reclamation as each proposed mine phase is completed. The conservation or mitigation measures of Alternatives B and C would provide for fish and aquatic habitat enhancements beyond what would be required by Washington Department of Natural Resources surface mining reclamation standards currently in effect. Notably, the rural residential development scenarios under Alternatives A-1 and A-2, and to a lesser extent under Alternative C, could result, indirectly, in increased bank and flood protection via structural additions, such as bank hardening and levees, as discussed above under *Floodplain*. This could result in lost opportunity for channel migration and geomorphic evolution. Alternative B provides for recontouring and “avulsion readiness” in the existing ponds, and emphasizes bioengineering techniques for erosion control.

All three mining alternatives would result in a restored and enhanced riparian area as well as aquatic habitat along Dean Creek, although Alternative B would incorporate a floodplain terrace to allow increased meander opportunities, rather than construction of a berm to restrict lateral stream movement. Both Alternatives B and C would also add to Dean Creek seasonal flow levels by pumping water from the bottom of existing ponds during low flow periods in late summer months.

### ***Terrestrial Habitat and Wildlife***

Cultivated fields occupy the largest area of the project site, approximately 149 of the 300-acre project site. Much of the site consists of pasture for dairy cattle or cultivated for silage or livestock feed. The margins and some isolated portions of the currently irrigated fields include approximately 18 acres of uncultivated uplands and upland forest. An additional 20 acres is presently in active restoration to valley bottom forest.

The forested riparian corridor along the East Fork Lewis River has been identified as a priority habitat that provides “high quality habitat with multiple layered canopy” (WDFW, 1997). No direct effect to the East Fork Lewis River riparian habitat is expected to occur as a result of any of the proposed alternatives because of the separation between processing and/or mining activity locations and the riparian habitat. Under Alternative B, Storedahl would physically and/or financially supplement annual efforts to enhance floodplain habitat functions in the East Fork Lewis River watershed.

Only one terrestrial protected species is considered as a potential inhabitant on the project site, the Oregon spotted frog. The Oregon spotted frog is listed as a Washington State endangered species and is a federal candidate for listing under the ESA.

#### Potential Impacts of Alternative Actions on Terrestrial Habitat and Wildlife

Alternative A-1 would provide the least benefit to terrestrial habitat and wildlife, as it is the most likely of all four alternatives to maintain a monoculture similar to what presently exists on a majority of the site. In the three mining alternatives, varying degrees of restoration of open water habitat, emergent and forested wetlands and upland valley-bottom forest would increase the diversity, amount and quality of available habitat for wildlife. Alternatives B and C would further enhance the terrestrial environment by ensuring that the area would remain as undeveloped open space. Alternatives A-1 and A-2 do not include measures to survey or confirm the presence of Oregon spotted frogs on the subject property or measures to protect them. Under Alternatives B and C, mitigation measures would be implemented to protect the species if the frog is determined to be present within the project site.

#### Cumulative Impacts on Terrestrial Habitat and Wildlife

All three mining and reclamation alternatives would result in a restoration of the site to a valley bottom forest within a mosaic of ponds and wetlands replacing what is presently open pasture or cultivated fields. Alternative B would include a conservation easement limiting the future use of the property to habitat enhancement in perpetuity. Under Alternatives B and C, the site would be gifted to one or more not-for-profit organizations or public entities for inclusion in the greenbelt under acquisition by Clark County and use as fish and wildlife habitat and open space. Under Alternative A-2, the reclaimed land would be partitioned into waterfront home sites.

Development of the site for rural residential/agricultural land uses would further reduce the limited habitat values presently offered. The development scheme would also create a substantial barrier to the continuity of the greenbelt and the valley bottom habitat system planned and being implemented by the county and its partners.

#### **Affected Built Environment and Environmental Consequences**

Road and bridge construction, farming practices and other human activities have substantially reduced the complexity of the river and adjacent uplands while providing agricultural and development property. Gravel mining, agriculture, and residential development have been increasing in the vicinity of the project site since the decades of the 1940s and 1950s.

#### ***Existing Land Uses***

The project site consists of 300 contiguous acres adjacent to the East Fork Lewis River and transected by J. A. Moore Road/NE 61<sup>st</sup> Avenue/Bennett Road. Mining, processing and stockpiling, and road development has been conducted on approximately 80 acres, resulting in five ponds of varying sizes and stages of use and reclamation. Included in

the mining area are approximately 15 acres devoted to raw aggregate processing, a small office/scale house, a maintenance building, and other areas used for material stockpiles, equipment and fuel storage, and truck and employee parking.

Land-uses near the project site include various agricultural activities, rural residential development, a Clark County road maintenance facility, and active and inactive sand and gravel mines and ponds are adjacent to the Storedahl operation. Past mining in the local riverine environment is described in Technical Appendix C Section 2.7.3, and illustrated on Appendix A, Figure 2-4.

### ***Planned Uses***

The *Clark County 20 Year Growth Management Plan* designates the project site as Agricultural Land. Approximately 58 acres of the 178-acre portion of the project site proposed for mining expansion are designated as Mineral Resource Lands. The entire project site has been zoned Agriculture-20, with the Surface Mining Combining District overlay applied to the 58 acres of Mineral Resource Lands. The growth management plan recognizes mineral extraction as one of the primary uses in the agricultural areas. Application is pending to restore the surface mining combining district to the portions of the project site outside the regulatory floodplain, along with an application for site plan review and approval.

The *Clark County Shoreline Management Master Program* designates the portions of the project site within shoreline jurisdiction of the East Fork Lewis River, as a Rural Shoreline Environment. Mining is a permitted use in rural shoreline environments. No mining is proposed within shoreline jurisdiction, although mineral resource processing in portions of the shoreline area is proposed to continue. The shoreline management program is silent as to the specific regulation of processing and storage of sand and gravel. Applications for shoreline permits are pending.

The comprehensive plan land-use designation for the adjacent properties is Agriculture-20, Rural Estate 5 and Rural Shoreline Environment.

### ***Traffic and Transportation***

Four intersections of strategic importance along the primary haul route from the project site would continue to operate at Level of Service (LOS) C (minimum acceptable for Clark County rural areas) or better during the morning and afternoon peak periods under all alternatives.

### ***Utilities and Services***

Urban utilities do not extend to the vicinity of the project site. None of the alternatives would generate the need for public water, sanitary sewer, or storm sewers.

## ***Noise***

Noise from the processing plant would continue at present levels for the duration of the on-site processing of imported material and is a baseline condition. Previous operators, as well as Storedahl, have mined and/or imported materials for processing for the past several decades at the site. Processing has been intermittent, in response to market demand and the available stockpiled reserves at the site. Since 1987, when Storedahl began operations at the site, processing periods at the site have ranged from 4 to 10 months in duration, see HCP Section 3.4.1. All of the alternatives analyzed will result in similar periods of operation, again based on market demand and available product reserves.

Based on the assessment criteria specified by the Washington Administrative Code and the Clark County SEPA policy, significant noise effects would occur with all three mining alternatives if noise mitigation measures are not included in the mining plans. Therefore, from a noise standpoint, no one alternative is more desirable than another. However, all mining alternatives include noise attenuation measures to reduce noise levels at receiving properties to achieve state and local noise standards or lower.

## ***Visual Resources***

Residential/agricultural development would be visible from adjacent at grade properties and from higher elevations. Mining activities would also be visible from the same locations. All mining alternatives include the placement of temporary berms and vegetation to screen mining activities from adjacent properties at grade. Lights required for nighttime maintenance activities would be hooded.

## ***Archaeological Resources***

Two archaeological investigations conducted on-site concluded that the potential for finding cultural resources or artifacts was low and there would be no significant effects from mining, reclamation, or residential development activities.

## ***Recreational Resources***

Recreational activities could be curtailed by the subsequent private owners of the property under Alternatives A-1 and A-2. Over the long-term, opportunities for recreation under the two action alternatives (B and C) would be provided at the discretion of the public or non-profit organizations ultimately managing the property, as long as those activities did not conflict with the conservation easement for the property.

## ***Energy and Natural Resources***

Electricity and petroleum use would continue to be utilized at current levels or, under the mining alternatives, experience a slight increase. Mineral resources would be extracted and processed. Agricultural resources would be reduced by about 0.25 percent of the county inventory.

### ***Summary of Effects on the Built Environment***

Alternative A-1 would result in the least impact to the human environment during the short-term. Alternatives A-2, B and C would produce negative effects on adjacent properties due to increases in noise and visual impacts, but those effects would be mitigated to state and local standards. Mining activities would be screened from adjacent developed property, and all practicable efforts would be made to reduce light impacts. None of the alternatives would result in significant effects on traffic or transportation facilities.

In terms of the potential effects on planned uses for the area, much of the neighboring area is planned for agricultural uses, which allows mineral resource extraction similar to that planned for the project site. The only other planned use is Rural Estate, which is specifically delineated to commingle with land used for resource-based activities and to support similar but smaller scale activities. The proposed mining should have no significant adverse effect on the planned land-use patterns in the vicinity.

Further long-term use of the site for recreation would likely be lost under Alternatives A-1 and A-2 unless subsequent property owners were to allow public access for such activities. In the case of Alternatives B and C, the potential to maintain the area as open space in perpetuity would be realized under either alternative. In these two scenarios, the area could be accessed for recreational purposes (as long as the activities were consistent with the proposed conservation easement) and would, over time, enhance the value of adjacent lands by providing vegetative buffers and restricting further development.

### ***Cumulative Effects of the Alternative Actions on the Built Environment***

Implementation of Alternative A-1 would result in a development pattern on the subject property mimicking those land uses and activities in the vicinity. The cumulative effects of this type of development on noise, traffic, land uses, governmental services and utilities, planned development patterns or other aspects of the built or human environment would be comparable to, and increasing only by a proportional increment, those already occurring from the existing development. Similarly, the post-reclamation partitioning and development of 7 to 10 sites under Alternative A-2 would have little cumulative effect.

The cumulative effects of implementing Alternatives A-2, B and C should be considered in terms of short-term (for the duration of mining) and long-term (post mining and reclamation) periods. The direct effects of mining on the built environment are discussed above and would shift geographically as each mining phase (area) is started, completed, reclaimed and activities move to the next. While mining activity would be noticeable to adjacent residents, the direct effects would be mitigated to achieve regulatory levels. However, the mining activity would, over the short-term, likely reduce the potential for additional development to occur in the vicinity, where such direct effects would be most noticeable to residents. As mining activity east of NE 61<sup>st</sup> Avenue and Bennett Road is completed and shifts to subsequent phases to the west, the direct effects to those residents

on the east side of the project site would be further lessened. In the long-term, residential development near the reclaimed area may be more attractive.

Under Alternatives A-2, B and C there would be a reduction of approximately 0.25 percent in agricultural land in Clark County. On the other hand, Alternatives B and C would add 300 acres to the lower East Fork Lewis River open space/greenbelt, increasing its size by 30 percent.

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ENVIRONMENTAL IMPACT STATEMENT--NOVEMBER 2003..... M-1**

**LIST OF PREPARERS.....P-1**

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## Abbreviations and Acronyms

afy	acre feet per year
°C	Degrees Celsius
cfs	Cubic feet per second
CMZ	Channel Migration Zone
dBA	A-weighted Decibels
dbh	Diameter at breast height
DNR	Washington Department of Natural Resources
DO	Dissolved Oxygen
DPS	Distinct Population Segment
Ecology	Washington Department of Ecology
EFLR	East Fork Lewis River
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	Evolutionary Significant Unit
FEMA	Federal Emergency Management Agency
FEIS	Final Environmental Impact Statement (used interchangeably with EIS)
FHCP	Final Habitat Conservation Plan (used interchangeably with HCP)
FONSI	Finding of No Significant Impact
GMA	Washington Growth Management Act
gpd	Gallons per day
HCP	Habitat Conservation Plan
ITP	Incidental Take Permit
LOS	Level of Service
LCFRB	Lower Columbia Fish Recovery Board
LWD	Large Woody Debris
MSL	Mean sea level
NFIP	National Flood Insurance Program
NPDES	National Pollution Discharge Elimination System
NRI	Nationwide Rivers Inventory
NTU	Nephelometric Turbidity Units
ROD	Record of Decision
RM	River Mile
SCS	Soil Conservation Service
SEPA	State Environmental Policy Act
SPCC	Spill Prevention Containment and Countermeasure Plan
SRF	Board Washington Salmon Recovery Funding Board
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
WAC	Washington Administrative Code

## CHAPTER 1: PURPOSE AND NEED

### 1.1 Introduction

J.L. Storedahl & Sons, Inc. and Storedahl Properties LLP (hereinafter “Storedahl”) are applying for an Incidental Take Permit (ITP) from the U.S. Fish and Wildlife Service (USFWS) and NOAA National Marine Fisheries Service (NOAA Fisheries) (collectively referred to as the “Services”) under Section 10(a)(1)(B)<sup>1</sup> of the Endangered Species Act of 1973 (ESA), as amended. An ITP would authorize incidental take associated with expanded mining, and reclamation activities as well as processing of sand and aggregate. In addition, the ITP would cover a number of voluntary fish and wildlife conservation and enhancement measures integrated with the noted surface mining operations and reclamation activities that would occur at the existing Daybreak Mine site and adjacent properties owned by Storedahl in Clark County, Washington. The ITP would also cover impacts which may arise from river avulsion through the proposed project site in the next 25 years as described in Sections 3.1 through 3.4, and HCP Section 6.2.6. Species for which Storedahl seeks ITP coverage include federally protected, candidate and proposed salmonids inhabiting the East Fork Lewis River, as well as federally listed, candidate and proposed terrestrial species that may be affected by Storedahl’s mining and processing activities. The application for the ITP is supported by a final Habitat Conservation Plan (HCP).

***Activities covered under the proposed action.*** Storedahl is a supplier of sand, aggregate and rock products in Southwest Washington and Northwest Oregon. Storedahl actively mines and processes in Cowlitz and Clark Counties and transports rock products throughout the lower Columbia region. Storedahl management activities associated with the proposed Daybreak HCP and ITP include those activities described in the final HCP as follows:

Clearing and stockpiling topsoil for later use in reclamation.

Mining of aggregate.

Transport of aggregate to the processing facility.

Aggregate processing (sorting, washing, and moving) and rock products storage.

Transport of rock products from the site.

Process and stormwater management.

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<sup>1</sup> §10(a)(1)(B) – “The Secretary may permit, under such terms and conditions as he shall prescribe- any taking otherwise prohibited by section 9(a)(1)(B) if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.”

Reclamation and habitat enhancement activities.

Granting of conservation easement(s) and fee simple transfer of the property.

Other activities not listed above common to mining, processing and reclamation of the rock products business.

**Process.** The Federal action of approving an HCP and issuing an ITP has the potential to affect the environment. The Services' decision of whether to approve the proposed HCP, therefore, is an action subject to review under the National Environmental Policy Act (NEPA). The Services are required to prepare a NEPA review document (an Environmental Assessment (EA) or Environmental Impact Statement or (EIS)), and circulate the environmental review package (HCP document and NEPA document) for public review. In this project the environmental documentation is in the form of an EIS, including a previously issued Draft EIS (DEIS) and this Final EIS (FEIS). In addition, the FEIS incorporates by reference the Daybreak Mine Expansion and Habitat Enhancement Project Habitat Conservation Plan, including its Technical Appendices. The DEIS was available for public comment and review for 92 days and this FEIS will be made available for a 30-day public review period. This FEIS includes revisions to the text and written responses to comments received during the DEIS review period. The HCP has been similarly revised. Following this 30-day public review period the Services will prepare a Record of Decision (ROD) that will formally document Storedahl's HCP and ITP proposal if approved or denied.

The remaining sections of this chapter will discuss the following.

- Section 1.2 Purpose and Need for Action
- Section 1.3 Environmental Review Process
- Section 1.4 Relationship to Other Plans, Regulations, and Laws
- Section 1.5 Issues and Concerns
- Section 1.6 Overview of Remaining Chapters

## **1.2 Purpose and Need for Action**

### **1.2.1 Purpose for Action**

The Services' purpose in this action is to respond to Storedahl's proposed HCP and request for an ITP. This proposed HCP and ITP would provide incidental take authorization and includes a number of proactive conservation measures for nine (9) listed, candidate and proposed species that may be present in the East Fork Lewis River watershed and the 300-acre Daybreak Mining and Habitat Enhancement Site, or downstream of the Daybreak Mine reclaimed ponds and proposed expansion area. See Table 1-1 and Figure 1-1. The ITP is proposed for a period of 25 years.

**Table 1-1  
Covered Species**

<b>Name</b>	<b>Latin Name</b>	<b>Federal Status</b>
Steelhead	<i>Oncorhynchus mykiss</i>	Threatened
Bull trout	<i>Salvelinus confluentus</i>	Threatened
Chum salmon	<i>Oncorhynchus keta</i>	Threatened
Chinook	<i>Oncorhynchus tshawytscha</i>	Threatened
Coho	<i>Oncorhynchus kisutch</i>	Candidate
Coastal cutthroat trout	<i>Oncorhynchus clarki clarki</i>	Proposed Threatened
Pacific lamprey	<i>Lampetra tridentata</i>	Species of Concern
River lamprey	<i>Lampetra ayresi</i>	Species of Concern
Oregon spotted frog	<i>Rana pretiosa</i>	Candidate and State Endangered

### **1.2.2 Need for Action**

The Services' need in this action is to provide for the protection and conservation for certain listed, proposed and unlisted, species to the extent intended under ESA Section 10(a)(1)(B).

#### **Decisions to be Made**

This subsection describes how the Services determine whether our need is met with respect to species protection and conservation.

Discussions between applicants and the Services during the development of an HCP and ITP proposal are conducted with the knowledge and understanding that specific criteria must ultimately be met before a permit issuance decision can be reached. The determination as to whether the ITP has met these criteria is made after the EIS and HCP are developed and subsequently revised based on public input. The determination as to whether the criteria have been met will be documented in the Services' decision documents consisting of the ESA Section 10 findings document, ESA Section 7 biological opinion, and NEPA decision document. These final decision documents are produced at the end of the NEPA and ESA process.

**ESA Section 10.** Under provisions of the ESA, the Secretary of the Interior (through the USFWS) and the Secretary of Commerce (through the NMFS) may issue a permit for the incidental taking of a listed species if they find that the application conforms to the issuance criteria identified in 16 USC 1539(a)(2)(A) and (B), 50 CFR 17.22 and 50 CFR 222.307. The issuance criteria are: (1) The taking will be incidental; (2) The applicant will, to the maximum extent practicable, minimize and mitigate the impacts of such taking; (3) The applicant will

ensure that adequate funding for the conservation plan and procedures to deal with unforeseen circumstances will be provided; (4) The taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild; and (5) That such other assurances as may be required that the HCP will be implemented.

As a condition of receiving an ITP, an applicant must prepare and submit to the Services for approval an HCP containing the mandatory elements of Section 10(a)(2)(A). An HCP must specify: (1) The impact that will likely result from the taking (2) What steps the applicant will take to monitor, minimize and mitigate such impacts, the funding available to implement such steps, and the procedures to be used to deal with unforeseen circumstances; (3) What alternative actions to such taking the applicant considered, and the reasons why such alternatives are not proposed to be used; and (4) Such other measures that the Director may require as being necessary of appropriate for the purposes of the plan.

The ESA Section 10 assessment will be documented in a Section 10 Findings Document, which will be produced at the end of the process.

**ESA Section 7.** Issuance of an incidental take permit is also a Federal action subject to Section 7 of the ESA. Section 7(a)(2) requires all Federal agencies, in consultation with the Services, to ensure that any action “authorized, funded, or carried out” by any such agency “is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification” of critical habitat. Because issuance of a Section 10 permit involves an authorization, it is subject to this provision. Although the provisions of Section 7 and Section 10 are similar, Section 7 and its regulations introduce several considerations into the HCP process that are not explicitly required by Section 10. Specifically included are indirect effects, effects on federally listed plants, and effects on critical habitat. The results of this “consultation” are documented in a Biological Opinion .

The ESA Section 7 consultation will be documented in a Biological Opinion, which will be produced at the end of the process.

**NEPA.** Issuance of an incidental take permit is a federal action subject to National Environmental Policy Act compliance. The purpose of NEPA is to promote analysis and disclosure of the environmental issues surrounding a proposed federal action in order to reach decisions that reflect NEPA’s mandate to strive for harmony between human activity and the natural world. Although Section 10 and NEPA requirements overlap considerably, the scope of NEPA goes beyond that of the ESA by considering the impacts of a federal action on non-wildlife resources such as water quality, air quality, and cultural resources. Depending on the scope and impact of the HCP, NEPA requirements can be satisfied by one of the three following documents or actions: (1) a categorical exclusion; (2) an Environmental Assessment (EA); or (3) an Environmental Impact Statement (EIS).

Activities which do not individually or cumulatively have a significant effect on the environment can be categorically excluded from NEPA. An EA is prepared when it is unclear whether an EIS is needed or when the project does not require an EIS but is not eligible for a categorical exclusion. An EA culminates in either a decision to prepare an EIS or a Finding of No Significant Impact (FONSI). An EIS is required when the project or activity that would occur

under the HCP is a major federal action significantly affecting the quality of the environment, though an agency may produce an EIS at its discretion even in cases where significant effects are not likely to occur. An EIS culminates in a Record of Decision.

The findings of this NEPA review will be documented in the form of a ROD, which will be produced at the end of the process.

### **1.2.3 Context**

Storedahl has informed the Services that curtailment of either the processing activity and/or some form of mine expansion upon Storedahl's privately owned lands adjacent to the existing processing facility would have substantial impacts on the long-term reliability of Storedahl to serve the community, which Storedahl has provided rock and gravel materials to for over 17 years. Ninety to 100 percent of the county's road maintenance oil rock and approximately 50 percent of the state's road maintenance material for the local area is obtained from Storedahl's mining and processing operations. Further, the proposed expansion "footprint" of mining activities is not proposed within an area containing known populations of federally protected, or proposed species.. The proposed request for review by the USFWS and NMFS includes the review of the proposed voluntary habitat enhancement measures identified within the final HCP that Storedahl proposes to implement in conjunction with proposed mining activities and potential effects to covered species that have entered, or could enter, the existing and proposed open water ponds and associated wetlands. Storedahl's final HCP includes 18 conservation measures. These enhancement or conservation measures cover the entire Storedahl property, including the existing ponds; the measures also extend offsite and include such elements as assistance in floodplain and riparian restoration in the East Fork Lewis River basin as well as gifting water rights for augmentation of instream flow.

Storedahl is seeking unlisted species coverage, in particular, for candidate and proposed species, to gain further assurances that no additional processing or mining limitations, land restrictions, or financial compensations would be required at a later date for species adequately covered by the HCP.

The responsibilities of the Services under the ESA are described in detail in Section 2.1 of the HCP and are herein incorporated. Briefly, the Services are responsible for listing species, subspecies or distinct population segments when their continued existence becomes at risk. Section 10(a)(1)(B) of the ESA authorizes the Services to issue permits for incidental take of listed species, which allows a non-federal entity to obtain authorization for incidental take of covered species for activities that might occur "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." The applicant must develop and submit a conservation plan that, among other things, minimizes and mitigates the impacts of take to the maximum extent practicable.

The Services are charged with the responsibility to recover listed species and conserve their habitats, and associated species. The Services must ensure that Storedahl's planned enhancement measures proposed in conjunction with processing, aggregate extraction and

reclamation actions comply with various legal mandates and ensure that the Services' decision on the HCP and ITP comply with NEPA regulations. The implementation of a voluntary HCP could provide a means whereby fish and wildlife habitat can be conserved and enhanced. It would also provide the means whereby floodplain functions within the lower East Fork Lewis River, as described at length in HCP Sections 3.1.4, 3.1.5, 3.2.3 and 3.3.2, can be maintained, and impacts to covered species minimized while Storedahl's land use objectives, including mining and processing, can be achieved. The Services must ensure that the HCP and related activity is in compliance with the "incidental take" requirements and other conservation mandates of the ESA.

### **1.3 Environmental Review Process**

The environmental review process associated with the HCP and ITP application has involved the following:

Internal, interagency, and Tribal scoping.

Public scoping announced in newspapers, interested party letters, and the Federal Register.

Development of a Draft Environmental Impact Statement based on information received during scoping, which compares the proposed project to baseline conditions to determine the potential effects that could occur, and analyzes the full range of reasonable alternatives.

Issuance of a Draft Environmental Impact Statement for an initial 60-day review period, announced in newspapers, interested party letters, and the Federal Register, with a 32 day extension

Issuance of this Final Environmental Impact Statement for a 30-day review which addresses public and agency comments received during the DEIS review period, announced in newspapers, interested party letters, and the Federal Register.

Forthcoming issuance of a Record of Decision.

### **1.4 Relationship of Other Plans, Regulations, and Laws**

A detailed discussion of the relationship between the proposed HCP and other plans, projects, regulations, and laws, is presented in the final HCP and this FEIS. Included are the following examples:

Planned and ongoing acquisition of riparian areas within the lower East Fork Lewis River for inclusion in a 'greenbelt' by the Vancouver-Clark Parks Department.

Floodplain functions and values and the interrelationship between flooding and health, safety and welfare.

Avoidance, minimization and mitigation of impacts to wetlands.

Projects funded by the Lower Columbia Fish Recovery Board including Lockwood Creek floodplain enhancement, riparian plantings along the lower East Fork Lewis River, and the Ridgefield pits restoration by the Pacific Rock Environmental Enhancement Group, Inc.

Development and description of all reasonable alternatives for avoiding and mitigating adverse effects to recreational values of the lower East Fork Lewis River which was proposed in 1993 for classification as a “recreational river” under the Nationwide Rivers Inventory.

Continued compliance with the existing National Pollutant Discharge Elimination System permit issued by the Washington Department of Ecology (Ecology).

Reclamation planning to comply with the requirements of the Washington Department of Natural Resources (DNR).

Compliance with the Clean Water Act (CWA).

County rezone request, site plan design, and associated shoreline permits

## **1.5 Issues and Concerns**

Issues and concerns identified during the scoping process include the following:

Will the proposed modifications maintain or improve the biological integrity of the lower East Fork Lewis River as compared to existing or baseline conditions?

Will the proposed HCP increase the level of incidental take with respect to existing or baseline conditions?

Will the proposed HCP activities jeopardize any species listed for protection under the ESA or adversely modify designated critical habitat for such species relative to existing or baseline conditions?

Will the proposed HCP cause any further degradation of water quality in the East Fork Lewis River relative to existing or baseline conditions?

## **1.6 Overview of the Remaining Chapters**

Following is a brief overview of the remaining chapters in this document.

Chapter 2 – Alternatives, Including the Proposed Action. This chapter presents alternatives developed from the scoping process of this environmental review.

Chapter 3 – Affected Environment and Environmental Consequences. This chapter describes the physical, biological and human environment, which would be affected by each of the alternatives. Following a presentation of the baseline conditions for each of the elements of the environment is a description of the effects of each alternative followed by a description of mitigation measures. For each section there is a summary of effects and analysis of cumulative effects. Finally, there is a summary of cumulative effects of the alternatives analyzed.

References Cited

Glossary

List of agencies, organizations and persons to whom copies of the statement are sent.

List of Preparers

Appendices.